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IBS S5 DSC/I-T

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Order No.: 2752000

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Termination Boards for Siemens SIMATIC ® S5 PLCs, with electrical isolation

Commercial data	
EAN	4017918120269
Pack	1 pcs.
Customs tariff	85389091
Weight/Piece	0.5427 KG

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Product description

INTERBUS controller boards for Siemens SIMATIC S5 controllersSIMATIC S5-115U through to 155U PLCs can be connected to INTERBUS by means of the IBS S5 DSC/I-T controller board. The controller board is connected to the controller via the SIMATIC I/O bus. It functions as a system I/O module with a variable address area so that the data of the INTERBUS input and output modules can be accessed directly using the periphery (L PW, T PW, ...) or indirectly using the process image (A I, S Q, ..).The INTERBUS system is activated automatically at power on or through the application. For this option, a system-specific parameter assignment for the INTERBUS system and controller board is stored centrally in a pluggable parameterization memory on the controller board.The user-friendly IBS CMD SWT INTERBUS software for the Windows operating system is available for creating the parameter data. In addition to parameterization, configuration and system documentation, IBS CMD SWT, as universal software, also makes possible the diagnostics of individual devices and the entire INTERBUS system. Furthermore, the local status of the connected INTERBUS devices can be displayed while the system is in operation. The following range of functions supplements this high-performance controller board:- Process data preprocessing (to IEC-1131)- Synchronous operating modes- Parameterization of alternative and changing bus segments- Parameterization using CMD- Startup using "Plug & Play" technologyThe IBS S5 DSC controller board offers a user-oriented LC display for visualizing the extensive INTERBUS system diagnostic capabilities. Operational and error states are shown on this display in plain text format. The direct display of messages helps reduce startup and downtimes, increasing the reliability of your systems.

Technical data

Control system

Diagnostics tool	DIAG+ from version 1.0x
Configuration tool	CMD from Version 4.0x

Software requirements

Configuration tool	CMD from Version 4.0x
Diagnostics tool	DIAG+ from version 1.0x

Power supply

Connection supply	Via SIMATIC I/O bus
Typical current consumption	1.5 A
Supply voltage	5 V DC
Range of supply voltages	4.8 V DC ... 5.3 V DC (including ripple)
Residual ripple	2.2 mV_{PP}

General data

Weight	500 g
Format	2 narrow slots
Degree of protection	IP00

Data interfaces

Interface	INTERBUS remote bus
Type of connection	9-pos. D-SUB female connector (optionally optical fiber possible via interface converters) with electrical isolation

Interface	Parameterization/operation/diagnostics
Type of connection	RS-232-C, D-SUB 9-pos. male connector
Interface	Host system
Type of connection	Siemens SIMATIC S5 115U (requires adapter capsule 6E5S 491-OLB11) - 155U, 130 WB, 150S
Interrupts	Are supported

INTERBUS data

Type	INTERBUS master
Number of devices with parameter channel (PCP)	max. 62
Number of supported devices	max. 512 (of which 254 are remote bus devices/bus segments)

Certificates / Approvals

Certification	CUL, GOST, UL

CUL

Nominal voltage U_N	5 V
Nominal current I_N	1.5 A

UL

Nominal voltage U_N	5 V
Nominal current I_N	1.5 A

Accessories

Item	Designation	Description
Cable/conductor		
2806862	IBS PRG CAB	Connection cable, to connect the controller boards to the PC (RS-232-C), length 3 m
2762003	PSM-KA-V24/TTY-P/PA/BB	Connection cable, to connect the controller board to the Pg (TTY), length: 90 cm
Memory		
2729389	IBS MC FLASH 2MB	Program and configuration memory, 2 Mbyte

Software

2730307	DIAG+	Diag+, diagnostics software, for INTERBUS networks, area of application: Startup, maintenance and, for example, for integration in control desk software, can be integrated in 32 bit applications (ActiveX-capable)
2721439	IBS CMD SWT G4	Network configuration software for INTERBUS Generation 4
2721442	IBS CMD SWT G4 E	Network configuration software for INTERBUS Generation 4

FAQs

- **Additional parameter "Data Consistency" when using the IB DB data block**

  During parameterization of an IBS S5 DSC/I-T controller board with the IB DB data block, a value must be entered for data consistency in addition to the parameters described in the manual. If this value is not entered, the following message is displayed: <0A44hex + module address>. Example, data consistency for eight bit: Entry: KY 128, 070. The entry 128 indicates that bit 15 is set and therefore that a data consistency of eight bits is ensured.

- **Control system switches to STOP state with an acknowledgment delay when executing FB60 IFSPINI**

  Check whether the communication register, as a parameter on the FB60 ISFPINI (ADDR: KF +xxx), corresponds with the preset value of the DIP switches on the controller board. If you have programmed a DB0 or DB1 (depends on controller type), check that the address of the communication register has not been used there. See also: INTERBUS User manual, driver software, for controller board for Siemens SIMATIC S5 Order no.: 27 47 73 0 Designation: IBS S5 DSC SWD UM INTERBUS Quickstart, Order no.: 27 47 66 2 Designation: IBS S5 DSC QS UM

- **How can I use the extended I/O area (Q) for the SIMATIC 115U and the IBS S5 DSC controller board?**

  The expanded I/O area (Q) can be used for PLCs with CPU type 945 if the controller board is in a PLC expansion rack. The bus in the base rack of the PLC does not allow simultaneous use of the P and Q areas. The expanded I/O area (Q) cannot be used for 115U PLC series with other types of CPU.

- **How do I set the data consistency?**

  The data consistency depends on the setting in the CMD software tool and on the operand in STEP 5. 16-bit consistency: L PW, T PW 32 Bit consistency: L PEW, T PAW The following marginal conditions must be observed: A consistency range assigns sequential addresses which must be addressed one after another. Access the ranges in the preset consistency (e.g. 8-bit consistency: byte commands). Data transfer must not be interrupted by alarm management or interrupts. Data consistency > 32 bits is typically possible, but is not guaranteed. Synchronous operating mode can be helpful here.

- **Is it possible to implement a bus parameterization with isolated disconnection if an incorrect bus is connected?**

  Yes, it is possible. Before a bus start it however is necessary to activate the configuration frame. Activate configuration frame: Code: 0711 Parameter_Count: 0001 Frame_Reference: 0001 Start bus: Code: 0701

- **Message 0946hex in the display of the controller board after writing the parameterization memory**

  The write protection of the parameterization memory is activated. Deactivate the write protection of the flash EPROM of the controller board (parameterization memory). See also: INTERBUS User manual Services and error messages of the firmware order no.: 27 45 13 0 Designation: IBS SYS FW G4 UM INTERBUS Diagnostics guide G4 Order no.: 27 47 28 0 Designation: IBS SYS DIAG DSC UM

- **Message 09D1hex on the controller board display, controller board not in RUN state**

  The flash EPROM in the controller board was recognized as being faulty. Replace the flash EPROM with a new one and start the controller board as usual. See also: INTERBUS User manual Services and error messages of the firmware order no.: 27 45 13 0 Designation: IBS SYS FW G4 UM INTERBUS Diagnostics guide G4 Order no.: 27 47 28 0 Designation: IBS SYS DIAG DSC UM

- **New MC flash memory cards**

  From firmware 4.35 there are 2 MB and 4 MB memory cards for all G4 controllers with PCMCIA slot: 27 29 38 9 IBS MC FLASH 2 MB 27 29 39 2 IBS MC FLASH 4 MB.

- **The PLC does not start when using the IBS S5 DSC controller board in a SIMATIC.**

  Another device in the PLC (multiprocessor coordinator, intelligent modules, PCs) has assigned I/O addresses in the preset communication register PW252 on the IBS S5 DSC controller board. This means that addresses are assigned twice. Change the address of the communication register on the controller board as well as on the starting module ISFPINI FB60. If you have configured the bus using the CMD software from Phoenix Contact, you must also enter the new address for the communication register. Please make sure that all other registers (diagnostic register, control register) are modified correspondingly. IMPORTANT: The changed communication register should lie outside the process image (PW0-PW127), otherwise services which are issued to the controller board using a function block may not be executed or may be executed incorrectly.

- **The services which were issued from the PLC to the controller board using a function block, are not executed or executed incorrectly.**

  A possible cause is that the selected address for the communication register is in the area of the process image. Please make sure that the communication register is outside the process image (from PW128).

- **Why do I need a function block (FB60, ISFPINI) in the PLC to start the INTERBUS interface?**

  The ISFPINI function block synchronizes the PLC with the controller board. The idea is to keep the PLC in the starting mode until the controller board indicates that it is ready for operation. See also: INTERBUS User manual, driver software, for controller board for Siemens SIMATIC S5 Order no.: 27 47 73 0 Designation: IBS S5 DSC SWD UM

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